REMARKS/ARGUMENTS

Claims 1, 2, 4 and 12-16 remain in the application. Claims 3, 5 and 6 are canceled. Claims 7-11 were withdrawn.

Information Disclosure Statement

The Examiner has considered the Information Disclosure Statement submitted on April 7, 2005 but has not considered the EPO communication included in that submission because it was not in correct format. The EPO communication is the International Search Report for PCT/EP97/04740. Below are the references cited in the International Search Report for PCT/EP97/04740, and listed on the PTO/SB/08B form also submitted.

Gonzalez-Barcena et al. "Responses to the antafonistic analog of LH-RH (SB-75, cetrolix) in patients with benign prostatic hyperplasia and prostatic cancer" The Prostate, vol. 24, 1994, pages 84-92, cited in the International Search Report for PCT/EP97/04740.

Oesterling et al. "Endocrine therapies for symptomatic benign prostatic hyperplasia," Supplement to Urology, vol. 43, no. 2 1994, cited in the International Search Report for PCT/EP97/04740.

GB 2218335, "Use of gonadoliberin derivatives for preparing tumour-inhibiting pharmaceutical compositions" assigned to INNOFINANCE ALTALANOS INNOVACI, published 11-15-1989, cited in the International Search Report for PCT/EP97/04740.

Since these references were already cited by the EPO, the references should be known to the USPTO and thus not enclosed. Please notify us if the references are not available and/or should be submitted.

Objection to the Specification and Improper Use of Trademarks

The Examiner has maintained an objection under 35 USC § 112, second paragraph relating to the improper use of trademarks in the claims. As already explained the LHRH antagonist cetrorelix is an international non-proprietary name. The corresponding trademark is CETROTIDE. The LHRH antagonist 'teverelix' is a non-proprietary name and the trademark is ANTARELIX. Both trademarks CETROTIDE and ANTARELIX are registered to Zentaris GmbH. Regarding the term, antide, we have found that the non-proprietary name is iturelix. Applicants have made appropriate amendments to the specification and the claims regarding the trademark antide. Antide has now been corrected to read as the international non-proprietary name iturelix. Applicant respectfully submits that these amendments overcome the reasons for objections raised by the Examiner.

Furthermore, the Examiner objects to the specification as having improper format. A replacement specification is submitted along with this response to the non-final Office Action. Thus, Applicants respectfully submit that the objection to the specification is overcome and withdrawal thereof is requested.

Claim Rejections under 35 USC § 112, first paragraph

The Examiner rejects claims 1, 2, 4 and 12-16 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.in view of the broad scope of the claims.

Manual of Patent Examining Procedure (MPEP) 2164.01 provides,

> "Any analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to

> enable one skilled in the pertinent art to make and use the claimed invention. The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Accordingly, even though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988). *See* also *United States v. Telectronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988) ("The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation."). A patent need not teach, and preferably omits, what is well known in the art."

Wherein the Examiner states that the description does not support the genus of non-peptidic LHRH antagonists, we have amended the claims to remove the term 'non-peptidic' in the claims. Applicant respectfully submits that these amended claims overcome the reasons for rejections raised by the Examiner. The specification of the present application is enabling because one reasonably skilled in the art could make or use the invention from the disclosures in the application coupled with information known in the art without undue experimentation. Withdrawal of these rejections is respectfully requested.

Claim Rejections under 35 USC § 112, Second Paragraph

The Applicant thanks the Examiner for withrawing the rejection of claim 1 under 35 USC § 112, second paragraph, with regards to the phrase "to a certain extent."

The Applicant thanks the Examiner for withrawing the rejection of claims 2-6 under 35 USC § 112, second paragraph, regarding consequences of lowered sex hormone levels wherein a "modification of the T cell population" is the result.

The Applicant thanks the Examiner for withrawing the rejection of claims 14-16 under 35 USC § 112, second paragraph, regarding administration of LHRH antagonists based on "needs" and "as needed."

The Applicant thanks the Examiner for withrawing the rejection of claims 14-16 under 35 USC § 112, second paragraph, with regards to a dosing regimen of LHRH that is "divided" throughout a period of time.

The Examiner has rejected claims 14-16 under 35 USC § 112, second paragraph, with regards to incomplete steps. The claims have been amended as suggested by the Examiner.

The Examiner has rejected claims 12-13 and 15-16 under 35 USC § 112, second paragraph, with regards to use of trademark. The claims have been amended.

Applicant respectfully submits that these amended claims overcome the reasons for rejections raised by the Examiner.

Claim Rejections under 35 USC § 102 (b)

The Applicant thanks the Examiner for withdrawing the rejection of claim 4 under 35 USC §112, second paragraph, in response to the amendment to delete the term "benign prostatic hyperplasia" from the claim.

The Examiner has, however, maintained the rejection of claims 1, 2, and 14-16 under 35 USC §102(b) as being anticipated by Engel et al. (WO 98/10781). The Examiner has also maintained the rejection of claims 1-2 under 35 USC §102(b) as being anticipated by Zakharova et al. whereby Zakharova et al. teach that LHRH antagonists can decrease thymocyte (T-cell) proliferation.

Under 35 USC §102, a claim can be rejected only if each element of the claim is disclosed in a single prior art reference. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants respectfully submit that Engel *et al.* fails to teach or suggest, either expressly or inherently, each and every element of the claimed invention as amended.

The Examiner found that Engel *et al.* teaches a method for treating BPH and prostate cancer using the LHRH antagonist cetrorelix, but it has no mention of the ability to modify T-cell populations. Furthermore, the Examiner found that Engel *et al.* teaches specific doses that anticipate the claimed doses and contained inherent properties that do not need to be disclosed explicitly in order to meet all of the limitations of the claims of the present invention, such as the ability to modify T-cell populations. The Examiner has also rejected claims 1 and 2 under 35 USC §102(b) as being anticipated by Zakharova *et al.* whereby Zakharova *et al.* teach that LHRH antagonists can decrease thymocyte (T-cell) proliferation. However, the Applicants respectfully disagree with the Examiner's positions.

Manual of Patent Examining Procedure (MPEP) 2112 provides,

> "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).
>
> In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). "

For the reasons discussed above, Applicants believe that the Examiner is speculative and conclusory in his rejections. However, in view of the rejection Applicants have narrowed the Claim 1 to include the indication of the lowered sex hormone levels in said subject result in modification of the T-cell population in said subject. Applicants further submit that these amended claims obviate the § 102(b) rejections and accordingly Applicants request withdrawal of these rejections.

Claim Rejections - 35 USC §103(a)

The Examiner has presented a new rejection of claims 1, 2, 4, and 12-16 under 35 USC §103(a) as being unpatentable over Engel et al. (WO 98/10781) in view of Zakharova et al., and further in view of Jacobson et al. (Endocrinology, 1994, 134(6): 2516-2523). The Examiner cited these references because, taken together, the Examiner states that it would

have been obvious for one of ordinary skill in the art to develop a method of using LHRH antagonists to lower sex hormone levels to treat any disease in which modifications of T cell populations is a critical factor.

Applicants respectfully disagree. The claimed invention is unobvious from Engel et al. Engel et al. in view of Zakharova et al., and further in view of Jacobson et al. for at least the following reasons:

First, Applicants believe that Engel et al. is no longer relevant because 'benign prostate hyperplasia' was already removed from the scope of the claims.

Second, Engel et al. teaches a broad method for lowering sex hormone levels, but does not specifically teach modification of T cell populations or treatment of autoimmune diseases at all. The fact that an aspect of a claimed entity is encompassed by a prior art is not sufficient by itself to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, as in any other 35 U.S.C. 103 case, it is essential that Office personnel find some motivation or suggestion to make the claimed invention in light of the prior art teachings. See, e.g., *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996). Engel et al. provides no motivation or suggestion to use LHRH antagonists to as a treatment to lower sex hormone levels.

In summary, one of ordinary skill in the art in reviewing Engel et al. would not use LHRH antagonists to as a treatment to lower sex hormone levels, let alone combine it with the teachings of Zakharova et al. and Jacobson et al.

In view of the foregoing, Applicants respectfully submit that Engel et al. in view of Zakharova et al., and further in view of Jacobson et al. does not render the claimed invention obvious. The claim rejections under 35 U.S.C. § 103(a) are overcome and the withdrawal thereof is respectfully requested.

Statutory Double Patenting - 35 USC §101

The Applicant thanks the Examiner for withdrawing the rejection of claims 1-14 under a statutory obviousness-type double patenting rejection as claiming the same invention as that of claims 1-11 of copending Application No. 10/717,129.

Conclusion

Based on the foregoing amendments and remarks, favorable consideration and allowance of all of the claims now present in the application are respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place the case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment, to Goodwin Procter LLP Deposit Account No. 06-0923.

Respectfully submitted for Applicant,

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